

Linguistic Style and Cognitive Load in Distance Learning: A Discourse Analysis of Sociolinguistics Modules

Gaya Bahasa dan Beban Kognitif dalam Pembelajaran Jarak Jauh:
Analisis Wacana terhadap Modul-Modul Sociolinguistik

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Abstract

Although Cognitive Load Theory (CLT) is widely used to evaluate multimedia learning, its application to textual language styles in printed distance learning modules remains under-explored. To address this gap, this study investigates how specific linguistic choices impact students' cognitive load within Sociolinguistics modules at Universitas Terbuka. Employing a multi-method qualitative design, the research analyzed 40 thematic textual segments and conducted semi-structured interviews with three Indonesian English as a Foreign Language (EFL) students whose first language is Indonesian. The findings indicate that within this specific context, extraneous cognitive load is primarily triggered by dense academic registers, syntactic opacity, and culturally distant examples. Conversely, localized contexts and conversational markers functioned as germane load triggers. These results suggest the presence of an "expert blind spot," where markers of academic rigor paradoxically act as cognitive barriers for autonomous learners. Consequently, instructional designs in text-driven distance education should integrate culturally relevant schemas and explicit linguistic scaffolding to optimize comprehension without diluting theoretical depth.

Key words: *language style; distance learning; cognitive load; discourse analysis; sociolinguistics*

Abstrak

Meskipun *Cognitive Load Theory* (CLT) telah digunakan secara luas untuk mengevaluasi pembelajaran multimedia, penerapannya pada gaya bahasa tekstual dalam modul cetak pembelajaran jarak jauh masih jarang dieksplorasi. Untuk mengisi celah tersebut, penelitian ini menginvestigasi bagaimana pilihan linguistik spesifik memengaruhi beban kognitif mahasiswa pada modul Sociolinguistik di Universitas Terbuka. Menggunakan desain kualitatif multi-metode, penelitian ini menganalisis 40 segmen tekstual tematik dan melakukan wawancara semi-terstruktur dengan tiga mahasiswa *English as a Foreign Language* (EFL) yang menggunakan bahasa Indonesia sebagai bahasa ibu. Temuan menunjukkan bahwa pada konteks spesifik ini, *extraneous cognitive load* (beban kognitif berlebih) utamanya dipicu oleh laras bahasa akademik yang padat, ketidakjelasan sintaksis, dan contoh-contoh yang berjarak secara budaya. Sebaliknya, konteks lokal dan penanda percakapan berfungsi sebagai pemicu *germane load*. Hasil ini mengindikasikan adanya "titik buta pakar" (*expert blind spot*), di mana penanda ketatnya kaidah akademik justru menjadi hambatan kognitif bagi pembelajar mandiri. Oleh karena itu, desain instruksional pada pendidikan jarak jauh berbasis teks disarankan untuk mengintegrasikan skema yang relevan secara budaya serta perancah linguistik (*linguistic scaffolding*) yang eksplisit guna mengoptimalkan pemahaman tanpa mengurangi kedalaman teoretis materi.

Kata kunci: *gaya bahasa; pembelajaran jarak jauh; beban kognitif; analisis wacana; sociolinguistik*

INTRODUCTION

Distance education relies heavily on the quality and accessibility of its instructional materials to facilitate independent study. In evaluating and optimizing these materials, Cognitive Load Theory (CLT) has become a foundational framework. However, existing research on cognitive load in distance learning has predominantly focused on multimedia learning environments, digital interface design, and general learner satisfaction (Mayer 2020; Zhang 2005). Despite printed text remaining the primary mode of instruction in many open university systems, the specific role of textual language style in printed modules remains critically underexamined.

This gap is particularly significant in subjects with high inherent conceptual difficulty, such as Sociolinguistics. For autonomous learners, the linguistic packaging of these concepts often encompassing lexical density, syntactic complexity, and academic register acts as a crucial cognitive interface. When printed modules utilize rigid or overly dense linguistic styles, they risk generating extraneous cognitive load, forcing learners to expend mental effort on deciphering the text rather than mastering the content. Therefore, unpacking how specific linguistic choices contribute to cognitive overload is essential for improving distance learning pedagogy.

The style of instructional texts performs two essential functions: conveying academic knowledge and establishing an affective connection between the material and its readers. Modules that adopt overly rigid and abstract discourse often create barriers to comprehension and reduce learner engagement. As (Przygoda 2017) emphasizes, e-learning texts must employ language that is clear, concise, and accessible to accommodate diverse learner profiles. Conversely, adaptive linguistic strategies such as contextualized explanations, culturally relevant examples, and communicative phrasing can strengthen comprehension and enhance student motivation (El-Sabagh 2021). Nevertheless, many distance learning modules continue to employ a “one-size-fits-all” approach that neglects students’ social, cultural, and linguistic repertoires. This oversight is particularly detrimental in second language (L2) educational settings, where learners are simultaneously navigating the cognitive demands of the subject matter and the linguistic complexities of the medium of instruction. Recent study underscores that learning academic content in an L2 is profoundly shaped by the intersection of task domain, presentation modality, and linguistic complexity (Lu and Sato 2025). When instructional designers fail to harmonize these elements, they risk alienating the learner and inhibiting the knowledge construction process.

Previous studies on distance learning have largely concentrated on issues of technological infrastructure, interactivity, and factors that affect students satisfaction (Klaus and Changchit 2014), while relatively few have investigated the role of language style as a determinant of learning outcomes. Some early works suggest that linguistic style matters (Vergie 2015) highlighted the need to apply specific linguistic criteria when preparing study materials for distance learners, especially second-language users of English. Recent studies have moved beyond general descriptions to pinpoint specific linguistic barriers in distance education texts. Elements such as excessive nominalization (Baratta 2010; Jiang 2016), weak cohesive signaling (Crossley, Skalicky, and Dascalu 2019), and dense syntactic structures (Yang, Yap, and Ali 2022) have been shown to increase extraneous cognitive load, ultimately making it harder for independent learners to grasp abstract concepts (John Sweller, van Merriënboer, and Paas 2019). This gap is particularly problematic for courses such as Sociolinguistics, which are inherently contextual and socially embedded.

Broader discussions in instructional design reveal a persistent tendency to treat language style as a technical subcomponent rather than an independent variable. Studies often subsume style within broader categories of module organization, overlooking how textual strategies such as metaphor, lexical choice, or politeness devices, mediate both cognitive processing and affective engagement (Sadoski 1999). Recognizing the significance of language style in instructional design is crucial, as it can enhance both learning outcomes and learner motivation. (Reichert et al. 2014)

More recent contributions stress the need for adaptive instructional language that reflects learners’ sociocultural backgrounds in order to sustain comprehension and engagement in distance learning (Malyuga and Petrosyan 2022). For autonomous learners who rely entirely on printed texts, this linguistic packaging acts as the primary interface for learning. When instructional materials employ a dense academic register (Jiang 2016), limited cohesive signaling (Désiron, Bétrancourt, and de Vries 2021), and culturally distant examples, they force students to expend excessive mental effort on decoding the language itself. Inserting too much information unnecessarily increases extraneous cognitive load, which disrupts the mastery of the actual subject matter (Zhao 2023). However, a significant gap remains, as no studies have systematically examined how this English linguistic style for L2 learners within the Indonesian distance learning context contributes to such cognitive overload.

Understanding how linguistic features affect distance learners requires explicitly linking Cognitive Load Theory (CLT) (J Sweller 1988) to the mechanics of reading comprehension. When students interact with printed modules, their working memory must balance three types of load. The intrinsic load is driven by the inherent difficulty of Sociolinguistics as a subject. However, the extraneous load is heavily influenced by how those concepts are delivered; poor linguistic packaging, such as dense syntax or excessive nominalization, unnecessarily overloads the reader’s cognitive capacity. On the other hand, germane load, which fosters deep learning can be optimized through accessible and

cohesive communicative styles. By adopting this theoretical framework, this study connects textual discourse directly to cognitive processing.

To systematically investigate this gap, a specific analytical approach is required. While previous studies often measure cognitive load through learner self-reports, test scores, or multimedia design metrics (Mayer 2020), they rarely examine the structural makeup of the instructional text itself. This is why discourse analysis is essential for this study. Discourse analysis provides the exact methodological framework needed to unpack the linguistic mechanics such as lexical density, syntactic complexity, and cohesive signaling that actively trigger extraneous cognitive load. By dissecting the text at the discursive level, this method allows us to identify not just that distance learners are cognitively overloaded, but precisely how the language style constructs that overload.

Aligning with the preceding explanation, the purpose of this study is to systematically analyze how the linguistic design of printed Sociolinguistics modules at Universitas Terbuka influences students' cognitive load. Specifically, this research seeks to answer three central questions: (1) how cognitive load is triggered by linguistic features across sociolinguistics modules?; (2) how do these linguistic choices contribute to students' perceived learning difficulties?; and (3) how do discourse characteristics and learner perceptions converge to explain overall module effectiveness? By answering these questions, this study expects to contribute both theoretical insights and practical guidelines for instructional designers, ultimately aiding in the development of more linguistically responsive and accessible materials for distance education.

METHODS

This study employed a multiple method qualitative design. This design was chosen because understanding textual cognitive barriers through both a close reading and an in-depth semi-structured interview (Silverman and Marvasti 2008). Close reading was employed to extract thematic segments from the texts, while in-depth semi-structured interviews were conducted to explore the learners' perceptions. These two methods enabled the strengthening of data validity throughout the research process.

This study had two data sources, namely the primary and secondary data. The primary data sources consisted of the 276-page Sociolinguistics module issued by Universitas Terbuka and the English Language Education Study Program students. That students were selected based on the following inclusion criteria: (1) Mid-to-late semester Indonesian EFL students in the English Language Education Study Program who had at least two semesters of experience with the module-based system; (2) Possessed intermediate English proficiency; and (3) Actively relied on the printed module. The purpose of these inclusion criteria was to ensure that students could provide sufficiently rich and authentic accounts of their lived learning experiences. (Guest, Bunce, and Johnson 2006). In other hand, the secondary data were obtained from articles within the last ten years from Google Scholar, ResearchGate, Scopus, Web of Science, and forth. Based on these sources, the nature of data consisted of sentences, clauses, phrases, and words obtained from the Sociolinguistics module and from students' perceptions.

To collect the data, this study used close reading and in-depth semi-structured interview. Technically, close reading was employed to extract thematic segments by highlighting data considered relevant to the objectives of this study. Meanwhile, in-depth semi-structured interviews were conducted virtually via Microsoft Teams after the final examinations. Prior to the interviews, the researchers selected informants based on the predefined inclusion criteria. To ensure confidentiality, each selected informants were assigned a pseudonym (e.g., Student 1, Student 2, Student 3, and so forth).

The data collected were analyzed using (Clarke and Braun 2013) thematic analysis (TA) alongside a discourse analysis approach. TA was operationalized by organizing the data into themes through several stages: (1) the researchers familiarized the data by annotating key elements; (2) the researchers conducted initial coding by extracting the data into meaningful segments to capture the essence of each unit; (3) the researcher established connections between codes derived from the module and those obtained from the informants; (4) the researchers organized these codes into categories to generate appropriate themes; (5) the researcher validated the resulting themes to ensure that they were supported by the data, interconnected across the two primary data sources, and sufficiently reliable; and (6) the researcher refined and finalized the themes (Isman, Fatawi, and Rustan 2025). In this thematization process, discourse analysis was employed as an analytical approach to identify the syntactic and lexical complexities within the Sociolinguistics modules, including the discursive practices emerging from the informants' experiences—particularly the learners' resulting

cognitive fatigue when engaging with the modules. This analysis ensured that the TA procedure remained objective and reproducible in accordance with the operational of cognitive load categories, as presented in Table 1.

Table 1. Operationalization of Cognitive Load Categories in the Discourse Analysis

Cognitive Load Dimension	Operational Definition in this Study	Observable Linguistic Indicators (Codes)
Intrinsic Load	The inherent conceptual difficulty of the subject matter, independent of how it is written.	<ul style="list-style-type: none"> - Introduction of abstract theoretical concepts - Foundational sociolinguistic terminology (e.g., <i>diglossia</i>, <i>language shift</i>)
Extraneous Load	Cognitive friction generated by rigid, inefficient, or overly complex instructional language.	<ul style="list-style-type: none"> - High lexical density (high ratio of content words) - Complex syntax (deeply embedded clauses, heavy passive voice) - Excessive nominalization - Culturally distant or Euro-centric examples
Germane Load	Textual elements that actively facilitate reading comprehension and cognitive schema construction.	<ul style="list-style-type: none"> - Explicit cohesive signaling (clear transitions, subheadings) - Conversational markers (use of personal pronouns like 'you' or 'we') - Localized/Indonesian cultural examples (e.g., <i>Krama</i>/<i>Ngoko</i>) - Presence of worked examples or procedural scaffolding

Finally, in the data validation process, the researchers employed trustworthiness strategies outlined by (Lincoln and Guba 1985). For the document analysis, peer-debriefing was conducted with a linguistics colleague to cross-verify the coding of textual features and their categorization into CLT dimensions, providing a critical external check (Creswell and Miller 2000). Furthermore, to validate the phenomenological insights, 'member checking' was utilized. Transcribed interviews and preliminary interpretations were returned to the participants, ensuring their reading challenges within the modules were accurately and authentically represented (Creswell and Poth 2016).

FINDINGS

The findings of this study are organized systematically to address the three research questions: the textual mechanisms triggering cognitive load (RQ1), the students' perceived learning difficulties (RQ2), and the convergence of these discourse characteristics with learner perceptions (RQ3).

1. Linguistic Features Triggering Cognitive Load

The discourse analysis reveals that extraneous cognitive load (EL) within the Sociolinguistics modules is predominantly triggered by dense academic registers, excessive nominalization, and structural complexity. For instance, when introducing foundational concepts, the module frequently employs highly abstract phrasing, such as *"the revival of interest in language in its broadest sense and the incorporation of social and cultural factors"* (Code: IL-COMP / EL-JARG). Furthermore, explanations of theories like communicative competence consistently rely on long sentences with deep clause embedding (Code: EL-STRUCT). This textual pattern demonstrates that the structural formulation of the text creates mechanical processing barriers. Learners must expend mental effort decoding the complex syntax and abstract nouns before they can engage with the intrinsic difficulty of the subject matter. Conversely, textual segments that effectively trigger germane cognitive load (GL) are characterized by concrete cross-linguistic comparisons, sociohistorical narratives, and familiar cultural

references. When explaining linguistic symbolism, the text utilizes a concrete comparative illustration: "mobil, car, oto, and Wagen" (Code: GL-EXAM). Similarly, to contextualize modern communication practices, the module anchors theories to tangible, everyday concepts like "MTV, SMS, and email" (Code: GL-CONTEXT). This pattern functions as explicit textual scaffolding. By utilizing familiar concrete nouns and contemporary cultural markers, the language style helps learners map new, abstract sociolinguistic theories onto their pre-existing knowledge schemas. The complete classification and pedagogical interpretation of these linguistic features are mapped in Table 2 below.

Table 2. Cognitive Load Classification of Linguistic Features in Module Segments

Module Excerpt	Linguistic Feature	CLT Code	Interpretation
"The revival of interest in language in its broadest sense and the incorporation of social and cultural factors"	Abstract nouns, nominalization, theoretical register	IL-COMP / EL-JARG	Introduces a complex concept but uses dense academic language that may increase processing difficulty
Explanation of communicative competence using extended definitions	Long sentences, clause embedding	EL-STRUCT	Structural complexity adds additional cognitive effort beyond conceptual difficulty
Example comparing <i>mobil, car, oto, and Wagen</i>	Concrete illustration, cross-linguistic comparison	GL-EXAM	Supports schema formation by linking theory with familiar objects
Narrative about the adoption of the word <i>bulldozer</i> in French	Story-based explanation, sociohistorical context	GL-REF	Encourages conceptual understanding through real social experience
References to MTV, SMS, and email in communication practices	Contemporary cultural context	GL-CONTEXT	Helps learners connect sociolinguistic theory with everyday communication

As illustrated in Table 2, a distinct textual pattern emerges regarding the distribution of cognitive load. Rather than being evenly distributed, the data reveals a sequential dichotomy: extraneous load triggers (such as EL-STRUCT and EL-JARG) are heavily concentrated at the beginning of theoretical expositions, whereas germane load triggers (such as GL-EXAM) appear almost exclusively in subsequent, separate illustrative paragraphs. This pattern indicates that the modules separate abstract definitions from concrete scaffolding, requiring learners to navigate dense linguistic barriers first before accessing clarifying contexts

2. Linguistic Style and Students' Perceived Learning Difficulty

The thematic analysis of the interview data triangulates the textual findings by revealing how the linguistic style directly translates into perceived cognitive difficulties for the learners. The students' phenomenological experiences highlight three main areas of friction: academic rigidity and syntactic opacity, cultural alienation and the necessity of scaffolding

a. Academic Rigidity & Syntactic Opacity

The participants consistently reported that the module's formal academic register and occasional unnatural syntax create a mechanical reading barrier, forcing them into cycles of repeated reading. Student 1 explicitly critiqued the lack of communicative style: "Modul kurang interaktif terlalu informatif seperti buku bacaan biasa. Bentuknya formal seperti membaca artikel di jurnal ilmiah" (The module is less interactive, too informative like a standard reading book. The form is formal like reading a scientific journal article). Furthermore, Student 2 highlighted specific syntactic stiffness, citing awkward phrasing like "bisa kah membayangkan?" (can you imagine?), which disrupts the reading flow: "Ada beberapa part yang tidak baku kata-katanya... Saya harus membaca berulang kali untuk memahami konsep" (There are some parts where the words are not standard... I have to read repeatedly to understand the concept). The pattern here indicates that the non-interactive tone and structural stiffness

act as a surface-level barrier. For these Indonesian EFL learners, decoding the awkward syntax and formal register consumes their working memory before they can even access the underlying sociolinguistic concepts.

b. Cultural Alienation

The data also reveals that the participants experience a significant relevance gap due to the module's reliance on culturally distant and temporally outdated examples. Both Student 1 and Student 3 expressed a disconnect with the textual illustrations. Student 1 stated: "*Contoh-contohnya kurang relate. Karena konteksnya dalam budaya barat... jadi lebih sulit memahami dan mengkontekstualkan ke kondisi di Indonesia*" (The examples are not relatable. Because the context is Western culture... it is harder to understand and contextualize to conditions in Indonesia). Student 3 reinforced this by calling the examples "*jadul*" (outdated), explicitly citing the module's references to outdated technology like "CDs." This demonstrates a clear pattern of cultural alienation. The absence of localized contexts forces the students to process two layers of unfamiliar information simultaneously: the foreign cultural schema (e.g., Western norms) and the target sociolinguistic theory itself.

c. Necessity for Scaffolding

The learners expressed a perceived lack of instructional scaffolding withing the text, which fosters passive material reception rather than active autonomous learning. Student 3 mentions, "*Kita hanya menerima secara materi... Jika ada pertanyaan-pertanyaan... saya harus dipancing sehingga saya bisa mengerti*" (We only receive material... If there are questions... I have to be provoked so I can understand). This highlights a pattern where the unidirectional, "read-only" format of the discourse fails to engage the learners in active cognitive processing, leaving them reliant on external prompts to construct meaning.

3. Convergence of Textual Characteristics and Learner Perceptions

The synthesis of the discourse analysis (RQ1) and student perceptions (RQ2) reveals a direct convergence between specific instructional design choices and the cognitive realities reported by the distance learners.

a. Register Convergence

The discourse analysis identified dense academic phrasing (e.g., the heavy use of abstract nouns in Segment 12), the interview data independently mirrored this exact issue. Student 1 explicitly likened the textual format to "*membaca artikel di jurnal ilmiah*" (reading a scientific journal article), confirming that the formal register requires excessive decoding effort. The convergence indicates that the textual density (extraneous load) directly corresponds to the students' reported cognitive fatigue.

b. Example Convergence

The text's reliance on Euro-centric examples converges with the students' feeling of "non-relatability." This reveals that cultural relevance is a cognitive load variable. When an example is culturally alien (Extraneous Load), the theory becomes harder to grasp. The discourse analysis flagged the recurring use of Euro-centric or outdated illustrations, such as the use of "Swiss German" or references to "CDs." Correspondingly, the learners explicitly cited these exact types of examples as "*jadul*" (outdated) and "*kurang relate*" (not relatable), expressing a distinct need for Indonesian contexts to bridge their understanding. This pattern reveals that the absence of localized textual examples directly triggers a failure in schema activation for the learners.

c. Navigation and Information Density

the lack of explicit textual signaling converges with students' reports of passive reading behaviors. The module typically presents long, uninterrupted paragraphs of abstract definitions without visual breaks or conversational prompts. This structural characteristic aligns directly with Student 3's admission of needing external scaffolding: "*saya harus dipancing sehingga saya bisa mengerti*" (I have to be provoked so I can understand). The converging data demonstrates that a unidirectional, dense textual structure correlates directly with a lack of active cognitive engagement from the learners.

d. Assessment-Instruction Misalignment

The textual characteristic of using high-level abstract questions in formative exercises converges with students' perception that "Quiz answers are not in the text." This suggests a Construct

Misalignment. The text teaches *about* sociolinguistics (history, definitions), but the assessment requires *doing* sociolinguistics (analysis). Because the text hasn't provided enough "worked examples" of *how to analyze* (procedural knowledge), students feel the assessment is unfair. This increases Extraneous Load during the assessment phase, as students must "guess" expectations rather than apply knowledge. Table 3 illustrates the specific data instances where the linguistic features of the module intersect with the learners' phenomenological experiences. The pattern confirms that instances of high extraneous load in the text consistently match the exact points where students report cognitive overload or a breakdown in independent comprehension.

Table 3. Convergence of Textual Data and Phenomenological Data

Dimension	Textual Characteristic	Student Perception	Convergence Pattern
Register & Syntax	Heavy nominalization (e.g., "conceptualization", "compartmentalization") Syntactic stiffness/Translationese (e.g., "bisa kah membayangkan?")	"Bentuknya formal seperti membaca artikel di jurnal ilmiah." (Student 1) "Saya harus membaca berulang kali..." (Student 2)	Dense academic structure forces repetitive mechanical decoding (High Extraneous Load).
Contextual Examples	Reliance on Euro-centric contexts (e.g., <i>Swiss German, British RP</i>). Outdated cultural artifacts (e.g., <i>CDs, blackboards</i>).	"Contoh-contohnya kurang relate. Karena konteksnya dalam budaya barat." (Student 1) Identifies examples as "jadul" (outdated). (Student 3)	Culturally distant concepts fail to activate prior knowledge, requiring double processing.
Visual Scaffolding	Long, uninterrupted paragraphs of abstract definitions. Lack of communicative markers ("I/You").	"Modul kurang interaktif terlalu informatif." (Student 1) "Saya harus dipancing sehingga saya bisa mengerti." (Student 3)	Absence of textual signaling leads to passive reading and disengagement.
Narrative Anchoring	"The inclusion of the "Kalala" sociohistorical story (Module 2).	Implicitly positive preference for more "communicative" and narrative-driven explanations.	Narrative structures successfully anchor abstract concepts (High Germane Load).

DISCUSSION

The findings of this study move beyond identifying linguistic features to reveal how textual discourse functions as a primary cognitive filter in distance education. While previous studies have extensively applied Cognitive Load Theory (CLT) to multimedia and digital interfaces (Mayer 2020; Harilal, Sokhela, and Van Der Walt 2024; Zhang 2005), this research demonstrates that for autonomous learners, the linguistic surface of printed materials is the interface itself. The discussion interprets these textual phenomena through the lens of CLT, expanding the framework to account for the unique socio-cultural and linguistic realities of Indonesian EFL learners. The prevalent use of formal academic registers, heavy nominalization, and unnatural syntax within the modules represents an "expert blind spot" in instructional design. Rather than functioning purely as markers of academic rigor, these stylistic choices actively generate extraneous cognitive load for distance learners. The discourse analysis flagged frequent syntactic opacity, which students intuitively experienced as a mechanical reading barrier. This phenomenon closely resembles "Translationese" (Chen, Li, and Liu 2024; Chuang and Yang 2022) resulting a text that feels like a rigid, direct translation from foreign academic sources. For Indonesian EFL students whose first language is Indonesian, navigating this dense English syntax requires immense working memory. Unlike traditional classroom settings where an instructor can mediate this "wall of text," distance learners are forced into exhaustive cycles of re-reading. This aligns with (Jiang 2016), who argue that dense academic prose often obscures meaning

for novices. Consequently, this study extends CLT by showing that in text-driven L2 learning, syntactic rigidity is not a cosmetic issue but a primary source of extraneous cognitive overload.

The findings also reveal that cultural relevance is not merely a motivational factor; it is a critical, measurable variable of cognitive load. The findings indicate a profound "contextual dissonance" between the module's Euro-centric examples and the learners' lived reality. When the module utilizes foreign contexts like Swiss German or British RP to explain foundational theories, it inadvertently imposes a "double-processing" burden. Learners must expend mental effort constructing an unfamiliar cultural schema before they can process the target sociolinguistic concept. If the materials had leveraged the learners' immediate linguistic ecology such as the distinction between Javanese *Krama* and *Ngoko*, or the shifting dynamics between standard *Bahasa Indonesia* and *Bahasa Gaul*, the cultural processing would be bypassed entirely. While previous CLT literature emphasizes the reduction of visual clutter (Mayer, 2020), this study refines the framework by demonstrating that "cultural alienation" functions identically to extraneous load. Conversely, localized contexts act as powerful germane load triggers, allowing learners to anchor abstract theories directly onto their pre-existing sociolinguistic knowledge (Klepsch & Seufert, 2020).

The learners' reliance on external scaffolding highlights a critical deficit in the module's internal signaling, leading to assessment-instruction misalignment. The findings showed that students felt they only "received" material passively and struggled with analytical quiz questions. This indicates that while the text introduces high intrinsic load (e.g., complex theories), it fails to provide the procedural scaffolding (e.g., worked examples, conversational prompts) necessary to manage that load. This reflects a violation of the Personalization Principle (Margulieux and Catrambone 2021); the lack of a conversational, reader-oriented style ("I/You") creates psychological distance. In the absence of visual anchors and explicit textual cues ("for example," "in conclusion"), learners suffer from cognitive fatigue. This finding confirms (Leppink et al. 2014) assertion that dense exposition without step-by-step modeling undermines autonomous performance, proving that macro-organization in printed text acts as an essential attentional scaffold.

It is important to note that these insights are drawn from an in-depth, qualitative examination of a single module set and a purposively small interview sample. While this limits statistical generalizability, the rapid achievement of thematic saturation provides a highly focused, phenomenological account of the cognitive barriers in distance learning. The deep convergence between the textual structures and the specific cognitive frictions reported by the students suggests that these mechanisms are highly salient for the target demographic. Ultimately, this study refines the application of Cognitive Load Theory within distance education. It shifts the theoretical focus from digital and multimedia design to the discursive mechanics of printed instructional texts. The study argues that in an L2, self-directed learning context, linguistic parameters such as syntactic transparency and cultural localization, must be formally recognized as regulators of cognitive load. By identifying the "expert blind spot" and "contextual dissonance" within instructional materials, this research provides a nuanced theoretical framework for understanding how language style constructs, rather than merely conveys, the distance learner's cognitive experience.

CONCLUSION

Based on the analysis of core research of this study, it can be concluded that the linguistic surface of printed distance learning materials acts as a primary cognitive filter, where rigid academic registers and culturally distant examples generate extraneous cognitive load that severely disrupts autonomous comprehension. By extending Cognitive Load Theory beyond digital multimedia into the realm of L2 textual discourse, this research establishes that syntactic transparency and cultural localization are not merely stylistic preferences, but critical structural requirements for cognitive schema construction. Although drawn from a qualitative examination of a specific module set and a small, purposive learner cohort, the deep convergence of textual and phenomenological data provides a robust baseline for these theoretical claims. Moving forward, instructional design in distance education must prioritize conversational scaffolding and localized schema activation over traditional markers of academic rigor, and future research should empirically test the impact of these linguistically responsive interventions on autonomous learners' academic performance.

Several limitations in this study should be noted. First, the interview data relies on a small sample size. While this was sufficient to reach thematic saturation for the selected participant profile, the qualitative design means these findings cannot be statistically generalized to the wider student population. Second, the discourse analysis focuses exclusively on the printed Sociolinguistics module.

Unpacking Cognitive Load in Distance Learning

Because different academic disciplines have their own textual conventions, the way language style impacts cognitive load might vary in other subjects or across different learner demographics.

Future research could employ quantitative or mixed-methods designs with larger sample sizes to measure the precise impact of linguistic features on cognitive load. Comparing texts from multiple disciplines would also provide a broader understanding of textual barriers in distance learning. Finally, experimental studies are needed to test the actual effectiveness of the proposed textual revisions, such as using localized examples and conversational markers, in reducing extraneous load and improving reading comprehension.

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